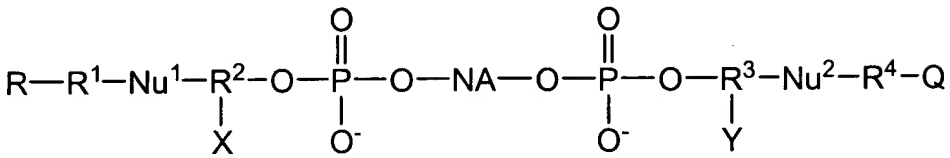
**Listing of Claims:**

32. (Previously Presented) A compound having the formula



wherein,

NA is a nucleic acid chain comprising nucleic acid monomers selected from the group consisting of natural nucleic acids, modified nucleic acids and combinations thereof;

$R^1$, $R^2$, $R^3$ and $R^4$ are linker moieties independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

$Nu^1$ and $Nu^2$ are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

R is a molecular energy transfer donor;

Q is a molecular energy acceptor; and

X and Y are the same or different and are non-nucleic acid stabilizing moieties that interact to bring R and Q into operative proximity, thereby enabling transfer of energy from R to Q.

33. (Previously Presented) The compound according to claim 32, wherein said molecular energy transfer donor is a fluorophore.

34. (Previously Presented) The compound according to claim 32, wherein said molecular energy acceptor is a fluorescence quencher.

35. (Previously Presented) The compound according to claim 32, wherein X and Y are both hydrophobic moieties.

36. (Previously Presented) The compound according to claim 35, wherein X and Y are members independently selected from the group consisting of saturated hydrocarbons, unsaturated hydrocarbons, steroids, fatty acids, fatty alcohols and hydrophobic peptides.

37. (Previously Presented) The compound according to claim 32, wherein natural nucleic acids are members selected from the group consisting of deoxyribonucleotides, ribonucleotides and combinations thereof.

38. (Previously Presented) The compound according to claim 37, wherein said modified nucleic acids are peptide nucleic acids.

39. (Previously Presented) The compound according to claim 32, wherein said nucleic acid monomers are joined by linkages that are members independently selected from the group consisting of phosphodiesters and modified phosphodiesters.

40. (Previously Presented) The compound according to claim 39, wherein said modified phosphodiesters are members selected from the group consisting of phosphorothioates and phosphoramidates.

41. (Previously Presented) The compound according to claim 32, wherein said nucleic acid chain further comprises a hybridization enhancing moiety.

42. (Previously Presented) The compound according to claim 41, wherein said hybridization enhancing moiety is a member selected from the group consisting of intercalating agents, minor groove binders and modified exocyclic bases.

43. (Previously Presented) The compound according to claim 32, wherein X and Y are independently attached to members selected from the group consisting of a natural base of said nucleic acid chain, a modified base of said nucleic

acid chain, a 3'-hydroxyl group of said nucleic acid chain, a 5'-hydroxyl group of said nucleic acid chain, a 2'-hydroxyl group of said nucleic acid chain, and a linkage joining nucleic acid groups in said nucleic acid chain.

44. (Previously Presented) The compound according to claim 32, wherein said compound is immobilized on a solid surface.

45. (Previously Presented) A method for amplifying a polynucleotide, wherein a compound according to claim 32 is a primer in said method, said method comprising:

(a) hybridizing said primer to said polynucleotide; and

(b) amplifying said polynucleotide.

46. (Previously Presented) The method according to claim 45, wherein said amplifying is a member selected from the group consisting of polymerase chain reaction (PCR), nucleic acid sequence based amplification (NASBA), strand displacement amplification (SDA) and combinations thereof.

47. (Previously Presented) A method for detecting or quantitating a nucleic acid, wherein the compound according to claim 32 is used as a probe, said method comprising:

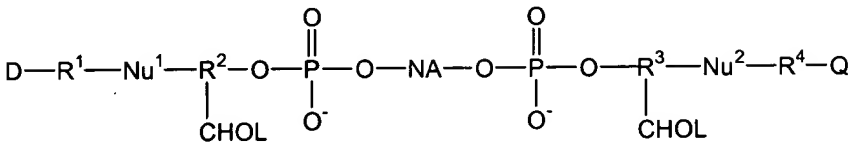
(a) hybridizing said compound to said nucleic acid; and

(b) detecting a change in fluorescence of said compound, thereby detecting or quantitating said nucleic acid .

48. (Previously Presented) The method according to claim 47, wherein said method comprises a member selected from the group consisting of 5'-nuclease assay, rolling circle amplification and combinations thereof.

49. (Previously Presented) A kit for quantitating nucleic acid, said kit comprising a compound according to claim 32.

50. (Previously Presented) A compound having the formula:



wherein,

CHOL is a cholesterol derivative;

$R^1$, $R^2$, $R^3$ and $R^4$ are linker moieties independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalky1;

$Nu^1$ and $Nu^2$ are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

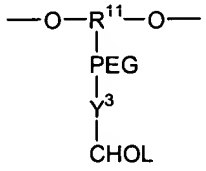
NA is a nucleic acid sequence;

D is a donor of light energy; and

Q is a quencher of light energy,

wherein the CHOL moieties interact to bring D and Q into operative proximity, thereby enabling transfer of energy from D to Q.

51. (Previously Presented) The compound according to claim 50, wherein $R^1$ and $R^2$ are independently selected and have structures according to the formula:



wherein,

$R^{11}$ is a member selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

PEG is polyethylene glycol;

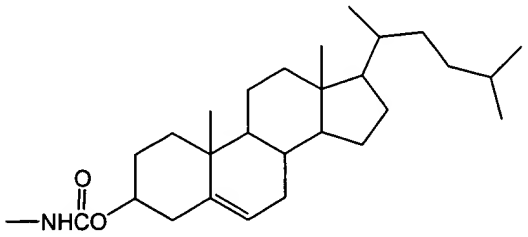
$Y^3$ is an organic functional group adjoining said PEG to said CHOL.

52. (Previously Presented) The compound according to claim 51, wherein said PEG has from about 2 to about 20 ethylene glycol subunits.

53. (Previously Presented) The compound according to claim 51 in which $R^{11}$ is substituted or unsubstituted alkyl.

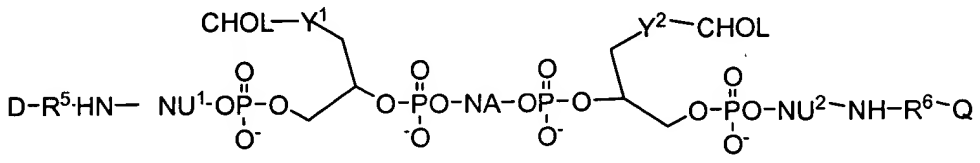
54. (Previously Presented) The compound according to claim 53, wherein $R^{11}$ is $C_1$-$C_6$ substituted or unsubstituted alkyl.

55. (Previously Presented) The compound according to claim 51, wherein $Y^3$-CHOL has the structure:




56. (Previously Presented) The compound according to claim 50, wherein $Nu^1$ and $Nu^2$ are nucleotides having an exocyclic amine group to which -$R^1$-D and -$R^4$Q are attached, respectively.

57. (Previously Presented) A compound having the formula:




wherein,

NA is a nucleic acid sequence;

$Nu^1$ and $Nu^2$ are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

$Y^1$ and $Y^2$ are linking groups independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

$R^5$ and $R^6$ are linking groups independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

D is a donor of light energy; and

Q is a quencher of light energy,

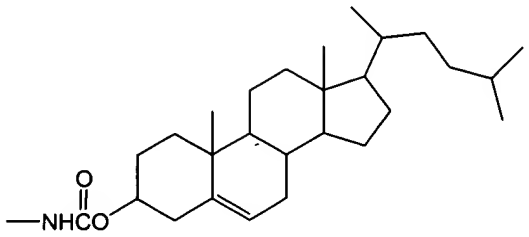
wherein each CHOL interacts with the other CHOL to bring D and Q into operative proximity, thereby enabling transfer of energy from D to Q.

58. (Previously Presented) The compound according to claim 57, wherein $Y^1$ and $Y^2$ are members independently selected from substituted or unsubstituted heteroalkyl.

59. (Previously Presented) The compound according to claim 58, wherein $Y^1$ and $Y^2$ are polyethylene glycol.

60. (Previously Presented) The compound according to claim 59, wherein said polyethylene glycol has from about 2 to about 20 ethylene glycol subunits.

61. (Previously Presented) The compound according to claim 57, wherein $Y^1$-CHOL and $Y^2$-CHOL have the structure:




62. (Previously Presented) The compound according to claim 57, wherein $Nu^1$ and $Nu^2$ are nucleotides having an exocyclic amine group to which $-R^5$-D and $-R^6Q$ are attached, respectively.